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ABSTRACT

Field researchers of sign language are the target of this methodological guide. The prospective researcher is briefed on the rationale of sign language study as language study and as distinct from the study of kinesics. Subjects covered include problems of translating, use of interpreters, and ethics. Instruments for obtaining social and language usage information from subjects are presented. Lists are provided of signs, basic sign vocabulary, cultural items, sentences for sign translation, first steps in analysis, and archives and outlets. A section on record-making covers technology, the use of the notebook, still and motion picture photography, and videotape. (JB)

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A FIELD GUIDE FOR SIGN LANGUAGE RESEARCH

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WILLIAM STOKOE
ROLF KUSCHEL

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A Table of Symbols for Writing American Sign Language Signs
(May be adapted and expanded for signs of other sign languages)
from SIGN LANGUAGE STRUCTURE, by William C. Stokoe. 1978. $3.50.
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Manually produced signs *of American Sign Language are written, first with a* **tab** *symbol to show* **where** *the sign action occurs:*

- ∅ *in front of signer's body*
- ⊂ *face or head region*
- ⌒ *forehead or top of head*
- ⍙ *mid-face, nose, eyes*
- ∪ *chin, lower face*
-) *cheek, side of face, ear*
- ⍑ *neck, throat*
- [] *trunk (shoulders to hips)*
- \ *upper arm*
- ✓ *forearm, elbow*
- Ⓐ *back of hand, wrist*
- D *inside of wrist*

Next *with a* **dez** *symbol for the handshape, and attitude*, of* **what acts:**

- A *closed hand*
- À *thumb extended hand*
- B *flat hand*
- B̈ *bent hand*
- 5 *fully spread hand*
- C *curved hand*
- E *retracted hand*
- F *loop and 3/finger hand*
- G *index finger hand*
- H *double finger hand*
- I *little finger (pinkie) hand*
- K *'k' hand of fingerspelling*
- L *angle hand, thumb & index*
- 3 *thumb & 1st 2 fingers spread*
- M *similar to* B̈ *or* O
- R *2nd finger crosses index*
- V *'victory' hand, spread*
- W *3 fingers spread, thumb on pinkie*
- X *index finger bent*
- Y *'y' hand of fingerspelling*
- 8 *mid-finger in from spread hand*

Then *with one or more* **sig** *symbols to show the sign* **action:**

Motion

- ^ *up*
- v *down*
- N *up & down*
- > *rightward*
- < *leftward*
- z *side to side*
- T *toward signer*
- ⊥ *away from signer*
- X *to & fro*
- ⍟ *in a circle*

Internal (hand or finger)

- ⌒ *bend*
- ⍾ *wiggle*
- □ *open*
- # *close*

Interaction: hand w/ hand or body

- ⋉ *approach*
- × *touch*
- ⋈ *link or grasp*
- + *cross*
- ⊙ *enter*
- ÷ *separate*
- ⍉ *interchange*
- ~ *alternate*

* **Subscripts** *show how* **dez** *(D) is held:*

- D_a *supine (palm up or back)*
- D_b *pronated (palm down or out)*
- $\not D$ *forearm near vertical*
- $D_<$ *salient finger to left*

Diacritics *show detail of* **action:**

- Å *sharp upward motion*
- ×̈ *repeated touching action*

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A FIELD GUIDE
FOR SIGN LANGUAGE RESEARCH

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A FIELD GUIDE FOR SIGN LANGUAGE RESEARCH

by William Stokoe & Rolf Kuschel

Introduction. From time to time field researchers make brief reports of encounters with groups in which a sign language is so prominently used as to be remarkable. The number of such reports and the information they might bring to scientific notice could quite possibly be enlarged if field investigators were better prepared for the encounters; for that purpose this field guide has been written.

Deafness in a population is the usual cause of wide use of signed language. Sign language users do not have to be deaf of course, but among deaf persons may be the likeliest place to find sign languages in use—especially signed languages not based on spoken languages (see Stokoe 1974). Normally about one to two hundred deaf persons will be found in one hundred thousand of a given population (Schein & Delk 1974), but in isolated endogamous groups the rate may often be much higher. Universally those persons deaf from birth or early childhood rely on gestural systems. These systems may be more or less like those of spoken languages, having grammatical rules and semantic characteristics like those underlying all languages but differing sharply on the surface from the surrounding spoken language or languages. Reliable information about such gestural systems could be useful in many ways; e.g. to settle or reformulate the old question whether there are universal pairings of particular gestures with specific and pancultural significations, or as Leach has suggested,

> if we concentrate our attention on those aspects of human ritual which employ, as signalling devices, parts and motions and attachments of the human body itself, then we may after all be able to demonstrate that there are structural universals implicit in the signal codes. (1972:343)

More than theoretical advances may come from new bodies of data and their analysis; a knowledge of the cognitive structures that form the foundation of the relation between signifié and signifiant in various sign languages the world over may well effect the creation of an easily learned system of signs to be used as a tool of communication—such a signa franca as Margaret Mead more than once

spoke of as desirable when she saw her lectures translated into American Sign Language for deaf audiences.

More knowledge about signed languages could also help to show to what extent biological and cultural forces interact in the communication of human beings and could be instrumental in discovering more about the origin, evolution, and nature of language and the species that uses (or use) it.

But dependence on chance encounters and brief notes will not soon enlarge knowledge. Therefore, in the hope that ethnographers afield or in urban settings who do encounter sign languages in use may capture valuable information otherwise lost to science, we present this guide to procedures designed to maximize the quantity and quality of data collected. We urge too that no opportunity be lost and that every lead to such material be followed quickly, for although gesturing is at least as old as the primate order, situations in which language-like signing occurs may be ephemeral (see Kuschel 1973).

Distinguishing features of sign language systems. In higher orders of the animal kingdom members gain much information about conspecifics and others by watching them. When this channel of information becomes only slightly more elaborate, it serves for two-way communication. When used by man, it goes by many names: gesture, gesticulation, face-to-face interaction, body language, pantomime, nonverbal behavior, kinesics, sign language... The list is open-ended; nevertheless two major dimensions along which this phenomenon varies can be determined. First is (a) psychological-physiological; i.e. how much the system's users have it in their awareness tends to determine its elaboration, scope, and relative independence from other communication systems; equally how the overt behavior required by the system is controlled by parts of the brain (e.g. limbic system, neocortex). Second is (b) social; i.e. how widely, through what subgroups and groups of what populations,the sign system is used and mutually understood determines its status as a signalling or "language" system.

In the great majority of mankind, both variables operate full scale. One can be fully aware of performing a particular gesture at a specific moment for a definite purpose and yet be quite unaware that others are reading information, apart from

that intended, about one's health, state of mind, emotions, and other kinds of relations, from the whole display. In the special class of communicative systems here being considered as sign languages, however, awareness of gestural elements is much more like the native speaker's awareness of syllables or words, while using language for some ordinary purpose.

It is not just particular gestures but certain features of their performance that may receive directed attention. If a speaker of English says, "That black bird is not a blackbird;" awareness of speaker and listener is focused on units smaller than words and not on the vowels and consonants. So too when a signer signs or interprets, "She signed that he was 'dying,' not that he was 'dead';" full awareness is being focused both on the exact meaning intended and on formal detail of expression.

The social dimension also shows variation in the gestural communication of everyday life. Involuntary muscular reactions to sudden threatening events are read in all cultures as 'shock' or 'surprise' or 'fright', even when their stimulus itself cannot be observed. Such a sign-meaning pair does not need a full context to be understood (cf Ekman & Friesen 1975). Nonetheless everyone has or should have had the experience of a special reaction to a certain twist or turn of some part of a special other person's body. Bodily communicated information may thus be as universal as a wince of pain or as unique as a lover's trick. It is the learned, systematic, regular use of vocal OR gestural signals in social settings that distinguishes both spoken and signed languages from less linguistic systems.

Sign language vs. kinesics. Kinesics, as described by Birdwhistell (1970) and others, seems to be about midway along the scale of social availability but nearer to the "unawareness" end of the psychological scale. At least it seems that a central concern in the study of kinesics is with those kinds of bodily actions by which members of a particular subculture communicate meaning in the context of the culture they share. In doing so they are not depending on a code common to the human species but are responding to sets of behavior learned in their subculture and linked with its other cultural systems. Neither are those communicating kinesically operating with a nonverbal language made and used by one intimate pair privately and exclusively. Precisely because much of the thrust of kinesic study is to reveal the meaning of the body actions analyzed, it would follow that full awareness

of signal and message does not characterize kinesic communication. The sign languages we are concerned with do not need analysts to interpret the signs' meanings to those who use them. Kinesics belongs to the whole interactive signalling system of a total culture and is inseparable from that culture's language. What we are calling sign languages do not usually accompany speech but substitute for it in a wide range of situations—they are in fact the languages, the interactive signalling system of a deaf or deaf-with-some-hearing subculture. Unlike the crossing of legs, which may be a kinesic signal that the crosser is unreceptive to the kinesic signals and intent of a sitter opposite, the performance of a sign language sign is CONSCIOUSLY INTENDED AND PERCEIVED as information exchange. A sign language sign and its meaning unite in a convention known well to all the signers of that sign language, and the normal context for a sign language sign is a string of other such signs and not a situation.

Sign language as language. Using the term "sign language" to a certain extent begs the question: We want to discover what sign language is, and further, what language itself may be. These questions may be too philosophical for a field guide. In practice a sign language presents itself as a signalling code with some of the attributes of language. Its bilingual users often volunteer the information that its elements, its signs, equate with the elements, the words, of the language spoken in their native culture. In psychological awareness, then, sign language fits into the same region of the scale as does the language it is being equated with. In proportion as it has equivalents for the lexicon of that language, the sign language falls in the same portion of the social scale—of course with the proviso that the users of the sign language may constitute only a small subset of the linguistic community of the spoken language.

Linguists or linguistically trained anthropologists are likely to ask at once about the syntax of a newly collected language, whether signed or spoken: Do its grammatical strings follow the rules of the other languages spoken in the region, or do they obey other rules? To answer this may put inordinate demands on the collector in the field, especially when the occasion for being in the field has more to do with general ethnography than with grammar. However, it is not unreasonable to take steps that make the data collected in

a sign-using community useful to linguists as well as to social anthropologists. The steps outlined below are meant to help in that accomplishment.

Linguists, anthropologists, psychologists, and others have also been known to ask a pseudo-question: Is sign language really language? This is not a real question because the criteria for "really language" can be manipulated to exclude or include whatever traits or design features the proponent or opponent of sign language wishes. Abbott (1975) suggests that we ask instead: How highly encoded are the parts of a given sign language system? He finds American Sign Language pronoun reference a less encoded system relatively than English pronouns (1975: 117); but see the evidence that ASL pronoun signs incorporate more information than was known to Abbott (Stokoe 1978: 82f). Abbott also finds that incorporating such abstract information as case-role identification and negation in the forms of ASL verbs shows a high degree of encodedness. Generally, some parts of any language are more highly encoded than others, and this appears to be true of sign languages also.

Verifiable conclusions like Abbott's can be reached only when the original data collection has been thorough and well directed. Data on which they can be based will not be found in the usual sign-to-meaning compilations made in the past. In most published descriptions of sign languages, words are followed by drawings, photographs, or verbal descriptions of the words the sign is supposed to translate. The fault of these lists is that they contain too many unanalyzed relations of signs to words, whether the words are of the investigator's language or of the language spoken in the region of the signing. Obviously list making is necessary in field study (see Basic Vocabulary section below), but too much emphasis cannot be put on accurate description of the physical form of the sign, manual, facial, postural, etc.; while allegations or guesses about meanings need to be treated as what they are, unproven.

What is needed to supplement the bilingual informant's naive pairing of a sign with a word is the material for a higher-order pairing, that of a string of signs with its referential and contextual meaning. For this reason the field investigator should record on film or videotape as many complete utterances and conversations in signing as possible and make copious notes to describe the context fully. The extent to which primary data, lexical information, and grammatical descriptions interrelate may be inferred from the following account.

In 1957 Kroeber and Voegelin each wrote not so much a field guide as a preliminary essay to the dissertation study by West of the sign language of North American Indians. Each dealt with somewhat different theoretical questions. Kroeber stressed the need for "systematic analysis of the sign language in terms of itself" (Sebeok 1972:xxxii), but concluded that this sign language "begins to operate only on the level of morphemes, and so far as possible semantically substantative morphemes—many relational ones would be hard to devise gestures for" (ibid.). In short, Kroeber says that the signs of the Indians as gestures serve as mainly nouns and verbs; but since many different native languages were spoken by the Indian signers, their gestures seemed to him code symbols for the meaning (i.e. morphemes) rather than elements of an independent system. Voegelin quotes Kroeber's sentence on the level of morphemes and agrees:

> There can be no question of the adequacy of Kroeber's minimum component [morpheme, lexical unit, individual 'sign'], so far as lexical inquiry is concerned; or even as concerns a modest grammar—a grammar which is, strictly speaking, an appendix of the dictionary. (1972: xxxii)

But he is content to have the question remain open:

> If the Sign Language should turn out to be susceptible to dual analysis [that is, have units smaller than morphemes], then... the dictionary is functioning as an appendix of the grammar. (ibid.)

West (1960) in the dissertation did not carry his own analysis deeper than the morpheme level, possibly because his two mentors did not expect that such analysis would be rewarding. However, Stokoe, also in 1960, found evidence for phoneme-like units, "cheremes", in American Sign Language. More recently Bellugi and other investigators have presented enough corroborative evidence for Battison to have concluded in 1974 that the term phoneme is appropriate for the submorphemic elements of ASL because the kind of rules governing this signed language is not different from the kind of rules that govern the phonology of spoken languages.

The foregoing is not to be taken as settling the question for all the sign languages that may be encountered. Some may indeed have a level of sub-morphemic elements, others may not. To undertake field study of culture and language without some preparation in phonetic and phonemic discrimination and notation would be negligent, but while the phonemes (or cheremes) of ASL have been identified (somewhat differently by different analysts, it must be admitted), we are far from knowing the full phonology of gestural languages and have only partial knowledge of the phonology of one or two. Therefore the field investigator so far as possible should scrutinize details of any signs presented by informants as the "same" and record large or small differences even though they may be accepted by native users as non-significant.

Methodological considerations. The study of a sign language, if it is to be scientifically satisfactory, is a most time-consuming process. It may demand several years of intensive work. Not only must the research worker learn the various signs and rules of syntax in the material but he must necessarily acquire a knowledge of the culture in which it is found. Because every sign language, if it is not an artificial or contrived code for signalling messages first put into a spoken language, is rooted deeply in the culture and natural surroundings from which it springs, a sign may contain such a concentration of cultural significance that its content cannot be discovered by one who has not studied the culture before. Consider, e.g., how the Rennellese sign for 'sister' when signed by the referent's brother sums up an entire set of cultural values. The two index fingers are held upright, back to back, and several inches apart by crossing the forearms; they denote the strongly respected brother-sister avoidance taboo (Kuschel 1973, 1974).

The economic and temporal resources at the disposal of each field worker may vary greatly; nevertheless it is most desirable for the sake of comparative study that the data collected from different cultures should be uniform and analogous. As one way of approaching this we have included (below, p. 24) a Basic Sign Vocabulary list. The words in the list are based on the 100-word list that Swadesh (1971) compiled for use in his lexicographical and glottochronological analyses (Samarin 1967). The principle of inclusion is the representation of universal conditions, which may be assumed to occur as signs in

most of the sign languages to be found throughout the world. Neither the compilation nor the use of a Basic Sign Vocabulary list is without problems. For one thing, it is difficult to imagine all the subjects that might occur pan-culturally; for another, it is difficult to conceptualize these subjects in a way that will be meaningful in all sign languages. Even though "habitation" for instance may be assumed to occur everywhere, with variations as to more or less permanent forms of dwelling, still it would be impossible to indicate with a single concept in the Basic Sign Vocabulary list all the possibilities that might be encountered (e.g. bivouac, blockhouse, bungalow, chateau, cottage, hacienda, hogan, house, hut, igloo, pen, tent, wigwam). In such a situation it is necessary to specify the character of the denotation of the sign with a gloss. In general, however, it will be expedient to collect both the closest exemplar offered to the item in the list and to collect all the signs in the language and culture that seem to pertain to the subject in question. In ethnographic terms, this kind of sign collecting goes hand in hand with eliciting a folk taxonomy.

One constantly recurring problem in field work is how to make the collection of data culturally meaningful for the informant. An informant would quickly find it both tiring and vapid to work with a long vocabulary list, especially one in which the signs are taken out of their contexts. One solution to this is to work with a limited area of semantics at a time, say groups of two dozen concepts, after each group the informant and the investigator may take a short break or turn to some other task. Lars van der Lieth (personal communication) states that many deaf people prefer to work on such limited sign language projects, going over them thoroughly before proceeding to a new area. It is also useful in getting variants for later investigation and more enjoyable for the informants to work with several in a group.

Another suggestion: as soon as the field worker observes the slightest sign of weariness or lack of concentration it is well to abandon temporarily the paradigmatic interview to proceed with less structured questioning. This may be done, e.g., by asking about more personally interesting matters to the respondent so that the situation becomes more culturally meaningful as well as giving the investigator more opportunity to become familiar with signs peculiar to the particular culture that might otherwise not be learned.

It is extremely useful to be familiar with the signs that are peculiar to the culture in order to understand the relation between the sign language and the culture in which it originates and serves as primary message system for its deaf users. To get an idea of this it is necessary to extend considerably the vocabulary we get from the list printed below. One needs also to collect signs for such matters as the material products of the society, the tools and processes of production, the clothing, communication, social norms, emotions, music, sexual behavior, and so on (below pp. 24-27). There is no ready answer to the question about which area to begin with. Much depends upon how much the field worker already knows about the culture, on the informants' special skills or knowledge, and on the relationship between observer and informant. It is impossible to compile a detailed list to cover all the signs that may be in use among sign language users of the world. We have therefore limited our suggestions to a list of broad, relatively simple subject areas, a list each investigator may particularize, alter, and supplement at his or her own discretion. It is a brief outline and does not pretend to be an exhaustive list.

To turn from lexicon to grammar, one way to get basic information about the grammar of a sign language is to use a series of coherent sentences to be translated into the local sign language. Below (pp. 28-30) we have presented as a guide to this method of elicitation a number of short simple sentences. Subsequent analysis of the signed renderings of these sentences should be possible to determine, for instance, whether the sign language has a fixed sign order and if this or some other grammatical device varies when sentences contain negation, questions, or commands. The sentences are chosen also so that the occurrence of different classes of signs can be analyzed and the matter of inflections of signs may be determined. Another question of particular interest is whether absent persons can be referred to by signs equivalent to personal pronouns or if they must be present or be referred to by signs that properly name them. It is probable that in some sign languages only certain of the personal pronouns of the surrounding spoken language will be found to be translated by signs; e.g. Elbert (1965) describes "127 Rennellese possessives", but Kuschel (1974) has found only a few possessives in the Rennellese sign language. In such cases it is important that the investigator record the differences in signed and spoken grammar.

In this phase of field work also it is up to the research worker to give the informant a chance to express himself or herself in the fields of most competence. The informant should be encouraged to tell, in front of the film or video camera, short, coherent stories about first hand experiences. If the informant is too modest to display such knowledge, the field worker can try to find an opportunity in which a third party can tell what the informant knows and can contribute. The researcher can also ask different signers to tell, on separate or the same recording occasions, the same story, when it is one known to several. In this way it is possible to study interpersonal as well as intrapersonal variations.

At a more advanced stage in the field work it is most important to record conversations of two or more users of the sign language. Ideally, these should include both formal and informal exchanges (for sign language diglossia, see Stokoe, 1970) and as many age levels and social backgrounds as may be feasible.

Attention should be given not only to the sign language usage itself and the syntactic rules but also to other interactional cues that may occur: How does the signer attract attention to himself or herself when about to communicate? What is the procedure when a signer takes, yields, or keeps the floor in a conversation? Does the signer make use of signals equivalent to the prosodic signals used in spoken language interchanges? (See Kendon 1979, Ciolek 1979).

Problems of translating. It is more than forty years since Sapir presented the view that perhaps led to the better known "Whorfian hypothesis:"

> The fact of the matter is that the "real world" is to a large extent unconsciously built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are not merely the same world with different labels attached. (1929:207-214)

The epistemological consequences of this dictum have been discussed thoroughly by philosophers and linguists. We will not extend the discussion here, but will merely point out that every language, signed languages included, has its own

unique grammatical and semantic rules, the consequences of which reach farther than the field of linguistics (e.g. the work of Susan Ervin-Tripp, 1964, which indicates that bilingual subjects tested by a thematic apperception test "have two different personalities"). Many of the words (or signs) of a given language, consequently, can be translated into another language only with limited success. The same is true of the syntactic rules or signals of specific languages. There may be countless concepts expressible in any one language that lack an exact equivalent in other languages—a conclusion which follows the discovery that each culture is a unique coming to terms with internal and external reality. When an attempt is made to translate such concepts, the psychological and social values intrinsically connected with them are easily lost.

This problem makes itself unmistakably felt in the practical aspect of collecting sign language data, especially if the collection is done via an interpreter from spoken language to sign language and vice versa. The solution depends implicitly on the result that is expected. If the purpose is translating fiction or more or less pedestrian matter, the best method may be what Werner and Campbell (in Naroll & Cohen 1970, ch. 22) call "the symmetrical or decentered translation aiming at both loyalty of meaning and equal familiarity and colloquialness in each language." If, instead, one is more interested in the possibilities and limitations of the source language itself, as a vehicle of expression for the culture, then one needs an "assymmetrical or unicentered translation in which loyalty to one language, usually the source language, dominates" (cf Casagrande 1954). Only the latter method is likely to uncover the implied structure of the source language.

Interpreters. The ideal form of collection uses the language of the informant. Not only does this diminish the abysmal gap between members of different cultures, but it also elicits many non-linguistic phenomena that are bound up with the language. This is an advantage and it brings with it other advantages—important in any research work—that the observer is able to communicate directly with the user of the sign language under study and thereby strengthen their interpersonal relationship.

Given the proper social, temporal, and economic resources, it is never too difficult to become sufficiently acquainted with the sign language one wishes to investigate. If the field worker

wishes to learn quickly and efficiently, it is important that all temptation to use any other language than the sign language be resisted in the initial phase of learning. But because one's resources are seldom optimal, the field worker must usually gather data in a limited time. In such a case it is necessary to work with an interpreter. Of momentous importance for the success of the research task is the choice of the right person to do the interpreting. The criteria for the selection of an interpreter for sign language research are in general those of selection of a translator for any task.

On the social-psychological level, the interpreter must be recognized in his own group, be respected by the informant or informants, be well oriented in his own culture, accept the task assigned, and be able to distinguish clearly between the ideas and opinions of informants and his or her own—and this last so well that no mistake be made as to who initiated the idea or opinion.

In the area of linguistics, the research worker must ascertain that the interpreter has a thorough knowledge of the source language, that knowledge of and contact with it are recent, and that the interpreter is truly bilingual—or trilingual, if the questions must be translated from the investigator's language to the interpreter's and then to the sign language of the informant. Demands made on an interpreter's skill are indeed great! Experience has shown that hearing-speaking persons whose parents were deaf signers make the best interpreters between hearing and deaf people.

If the person chosen as interpreter has not had previous experience with the work, training in this difficult task is mandatory. The aim of the training is to make the interpreter as exact as possible. This the field worker can do by practicing on signs for kin terms and on very simple sentences. During such exercises there will also be opportunities to discuss the best way of dealing with subjects in the one language that have no equivalent in the other. Here it is necessary for the research worker to insist that the interpreter unconditionally indicate difficulty or impossibility of translation at once; and ideally whether the reason is linguistic, personal, social, or other—

> e.g. A sentence like "My sister is a good looking woman;" could never be said in Rennellese or signed in Rennellese sign language, because the strict brother-sister avoidance taboo does not allow a man

to occupy himself with such a topic nor to communicate about it in public.

An important phase in the training program is translation and back-translation (see Werner & Campbell in Naroll & Cohen 1970). One can ask the interpreter to translate a series of simple sentences and record the output on film or videotape. Then a few days later, when the film is developed, that interpreter or a different interpreter is asked to watch the film and to translate the signed sentences back to the original source language. In spoken languages such preliminary back-translations are often "distressingly poor" (Werner & Campbell 1970), and there is no reason to suppose that it should be different in the case of signed language. On the other hand, these experiments can be used to help both the research worker and the interpreter to learn where they make their mistakes. In this way they may avoid making similar mistakes in the crucial stages of data collection.

In situations that allow no opportunity to undertake these preliminary interpreting exercises, the following procedure may be used, though it is disputable methodologically speaking. Give the interpreter a short instruction as to what is expected and what should be avoided. Then start off reading the words from the list below (page 24), and ask the interpreter to translate the concepts the words name into signs of the sign language and then ask the informant to repeat the sign in his own way. In order to guard against great discrepancies with this coarse method, it will be best to go through the same word list later, perhaps the next day. In order to include possible variations, it would be a good idea to ask the informant to take different positions when he forms the signs; e.g. one time through the list he might be sitting, the next time standing. When there are discrepancies in the formation of a sign the utmost scrutiny must be employed to determine whether they are caused by allowable variation of the sign or whether it is a case of variation due to communicative conditions such as confusion or ambiguity in the formulation of the eliciting question, mistakes in translation, misunderstanding, or some other cause.

In the interview phase proper, great care must be taken that the sentences to be translated from the spoken language to the sign language are as short and concise as possible. All forms of paraphrase, proverbs, or proverbial

expressions must be avoided at the start because of the semantic, syntactic, and cultural differences involved in their translation. The sign language researcher's technique should be to pose the questions directly to the informant, as if the latter understood his language and no interpreter intervened. This makes for more direct contact and emphasizes the central significance of the informant. In this way too the nonverbal cues, so important in any social contact, will be exchanged directly by informant and researcher and so serve to reinforce the informant in his position of principal figure in the situation.

MAKING RECORDS

Technology. The enormously rapid developments in the world of optics and electronics are helping to solve some of the greatest practical problems involved in the collection of sign language data. Linguists working with spoken languages for a decade or two have been able to use portable tape recorders for field materials, but only very recently have we seen a breakthrough for both visual and audible material, in the easily portable videotape recorder.

Critical comments are made from time to time in anthropological literature against machine-bound research. One of the complaints is that the instruments have an unfortunate psychological effect on the informants and so also on the data one brings home. This argument cannot be refuted; everyone has experienced getting out the tape machine, the camera, or the cine-camera only to find that the informant or the incident has disappeared in a wave of curious adults and children, who seem to have appeared from nowhere.

Generally speaking, continual use of the technical apparatus will result in a loss of interest by the spectators after only a few hours; and during the researcher's extended stay in the community, the apparatus will be regarded as an ordinary sight, just another oddity of the foreign research worker. This does not mean that the psychological problems involving reaction of informants to equipment are solved. However, the authors' experience has shown that once a good social relationship is established between the researcher (an interpreter if used) and the sign language user, confusion or anxiety about the technical equipment gradually disappears.

It is most important in this connection, however, that the informant understands that he can always interrupt a recording or have it erased if he wishes.

There is a special problem in certain cultures (e.g. in Moslem countries) where taking pictures, especially of women, is frowned upon. In such circumstances, if the research worker fails to win the understanding and permission of the hosts, there is nothing to do but respect their wishes and use the paper and pencil method.

The advantages of visual recordings are legion. For one thing they make possible the visible reproduction of a visually experienced course of events so that the sequence of movements can later be studied at leisure. The improvement in modern storage of such visual records also enables other researchers to examine and reanalyze the data of a colleague from their different theoretical viewpoints—an advantage that has all too seldom been enjoyed in the experimental social sciences.

While the cinematic or electronic registration of sign language is indeed quicker than manual notation, one must not be fooled into thinking that the ambiguous aspects of the interview can be illuminated later back home. If something is not clearly perceived or understood during the collecting, it cannot be satisfactorily reconstructed later at one's desk.

Depending on the purpose of the study, the technical resources, facilities in the area under study, and the personal preference and temperament of the field worker, the following methods may be used for sign language recording: Notebook, Still Photography, Motion Picture Film, Videotape. These are not alternatives but in many cases need to be used to supplement one another. In the sections below uses of these methods are discussed. Technical specifications are not included, as these are available elsewhere—the reader is particularly referred to Ivan Polunin's study "Visual and Sound Recording Apparatus in Ethnographic Fieldwork" (in Current Anthropology 11.3, 1970), which contains valuable technical and methodological information. This field guide contains no instructions on the finer points of photography either, so that beginners would do well to supplement their knowledge with one of the many guides to photography, still and movie (see e.g. Asher 1976 or Brodbeck 1976).

Notebook. The verbal description must be as detailed as possible, and the observer should be especially attentive to the starting point, the passing point, and the terminal point of a sign. It would be well to make a rough sketch of the sign, indicating the sequence of movements. The sign should also be described according to these five categories at least: (a) the sign's spatial position, (b) the specific configuration of the executing extremity (arm, hand, fingers), (c) points where the hand(s) touch the body or one another, (d) movements of the body or its parts, and (e) the facial expression.

The registration will be facilitated if one has become familiar with the various expressive motions of the parts of the body. The following summary gives some examples of these, but it must be stressed that these are only a selection and are not comprehensive:

The head may be stooping, sloping.
The shoulder may be hunched or lowered.
The forearm may be in a pronated, supinated or neutral position.
The elbow may be straight, slightly, or sharply bent.
The hand can be described according to the position of one of its four sides, ulnar, radial, volar, dorsal.
The wrist may be straight, flexed, or retroflexed.
The fingers may be extended, clenched, interlocked, adjacent, spread, crooked, cupped, or converged.
The face may show wrinkled forehead, raised eyebrows, open, widened, or squinted eyes, wrinkled nose, open or closed mouth, pursed, widened, protruded, or pressed together lips, clenched or horizontally bared teeth (note that Ekman & Friesen, 1975, have provided an excellent brief guide to facial expression analysis and recording, Unmasking the Face).
Movements may be short, sharp, brisk, rapid, quick, vigorous, circular or elliptical, oscillating, rotating, spiralling, undulating, clockwise or anticlockwise, bell-tolling, etc.
Trunk, legs, and feet may also enter into sign formation.

The adjectives used above constitute only a fragment of the almost endless possibilities for describing movement, but if field workers consult this list some progress toward more uniformity may be made. It is well to ascertain also whether

there are terms for kinds of movement in the language of the community being studied that may describe the phenomena of the visual language more accurately than do the words of English or other Western languages.

If drawings, photographic, or cinematic records are made, it is especially important that accurate cross-reference from these to verbal descriptions in the notebook be made so that misconstruction cannot occur.

Still photography. Photographs taken with an ordinary camera are a good supplement to notebook descriptions, but they are never sufficient by themselves, as they cannot capture the sequence and nature of movement. It is of critical importance in still photography of sign language that the photographer be able to open the shutter at the precise moment the gesture reaches its apex. Since this is a matter of small fractions of seconds, the chances of repeated success are small. It would therefore be advisable to take several pictures of the same sign. Too much frugality with the film is false economy in the long run. By the same token, the researcher should strive to get a whole photographic sequence of an individual sign, so that the starting point, the passing point, and the terminal point are all registered. A sequence of this kind can be taken with an ordinary camera, but the use of a motor-driven camera with a 4 to 6 picture per second capability is of considerable help.

For use with subsequent analysis, it would be a good idea to take a close-up picture of the most important part of the sign, especially if it is a complicated one. Long-focus lenses with a focal length of 85 or 105mm are well suited to this work. Signs photographed in profile will sometimes reveal details that cannot be seen in a frontal picture. Needless to say but important to remember in the confusion or enthusiasm of the actual situation—remove from the scene anything that might disturb the person being photographed!

Furthermore, one should try to avoid great contrasts in the picture. Overcast or shaded light is better for this kind of photographic activity than direct sunlight. Be sure also to have along enough batteries for light-meter and camera motor. In case one can choose between a fully automatic camera and one with manual control and a through the lens light meter, the latter is to be preferred. In case batteries fail and cannot be replaced, the whole system is inoperable in the former case, only the light metering in the latter.

Motion picture photography. Motion pictures have a considerable advantage over still photographs. The whole sequence of motions can be registered as it unfolds and can be rerun ad infinitum afterwards. By use of slow-motion projection, the research worker can sometimes analyze complex movements in detail that are opaque at actual speed, and frame-by-frame viewing is also a possibility. The movie film, just like the still, must be taken so as to give an overall impression of the physical posture of the sign user; an additional "take" should be made to record a closeup of the sign's (or sequence's) most significant phases.

The choice of camera narrows to 16mm or super-8mm format, with each having its advantages and drawbacks. The 16mm camera produces an indisputably better quality picture, and the area of its frame is four times that of the 8mm. On the other hand, it is heavier and more difficult to transport, and the film and processing more expensive. In recent years several good super-8 cameras have appeared on the market. They are easy to transport, very robust, operate with quickly loaded cartridges of film, and run on small batteries. They also are equipped to regulate the exposure time automatically according to light conditions. The disadvantages: The cartridges run only three minutes, making it impossible to record long sequences in one take; the small format is not easily enlarged to auditorium-size projection; and cartridge film is direct- (by reversal in processing) positive, eliminating the possibility of making a negative for safe archiving and work prints as needed for research.

In most cases, however, the super-8 camera is sufficient. No matter what type of camera is used, the highest available film speed should be used to get the best visual quality in adverse field conditions.

Eibl-Eibesfeldt (1971, 1973) and Hans Haas have developed an interesting technique for the field researcher. Noting that people change their behavior when a camera is pointed at them, they have used a mirror attachment in the lens of their 16mm cameras so that the camera is actually filming at right angles to the direction it is pointing. With this technique social interaction can be filmed in an unobtrusive way. These and other field workers, at a doubling of the expense for film, it must be admitted, have also used a recording speed double normal so that slow motion projection is of high visual quality.

Videotape. The videotape recorder, less than ten years old, revolutionized audio-visual technology. Excellent for recording sign language because of its low cost and easy, almost automatic, operation and because its results can be seen and judged almost immediately after recording, it was not suited to primitive field conditions by reason of its size, weight, delicacy of adjustment, and heavy current demands.

These reservations, however, have recently been much lessened; a cartridge videotape outfit is now available that weighs only 9kg including the batteries and is rugged enough for field use (see Polunin 1970 and The Video Handbook, 1976). Compared with the usual ciné camera, the portable vtr has the advantage of a considerably longer recording time (20-30 minutes). Its ability to present a finished recording immediately after the take and its rewinding speed make it an ideal tool for the collector of sign language data. Not only can the investigator evaluate the quality of the recording on the spot while there is still time for a retake, the tape can also be shown to the informant, interpreters, or others present to elicit their explanations or spontaneous comments on it.

General cautions. It is wise to guard against unpleasant surprises by making sure whether the film or videotape to be used is available near the recording site. The same applies to batteries. Sometimes money can be saved by buying film in duty-free zones, i.e. international airports. However, there may not be enough film in stock in such places so that it is always best to check both availability and price of supplies beforehand.

In tropical countries, damp heat tends to make the film develop itself if stored too long. This may be reduced or prevented by placing the film and camera in an airtight container filled with silicagel or putting them in a refrigerator if one is available.

What the audio-visual equipment yields depends first on the expertise with which it is handled. Fumbling and flurried fiddling with dials is more apt to appeal to a sense of the ridiculous than to inspire confidence in informants and interpreters. Every new piece of equipment should be mastered before any field work begins. If one is not totally familiar with the tools before one leaves for the field, it will be too late when one arrives at the destination.

Groves (1957) characterized a certain anthropological expedition as being "long on equipment and short on ethnography." Let us paraphrase Groves and advise the field investigator of sign languages to be rich in sign language data and frugal in the reliance on technical equipment.

SOME WORDS ABOUT ETHICS

Every research project implies a whole series of ethical considerations. This is particularly true of situations in which other people are involved. When studying a subculture or a culture other than one's own, it is necessary to acquaint oneself with the norms in the area one wishes to investigate. The best time to do this is before arrival if possible, but it must be done as soon as possible after arrival. Here we are concerned with sign language, but this is the total communication system of many of its users and includes all that is communicated about. In some cultures there are very strict rules that govern what may be said or asked in a given situation. If these rules are broken, the informant, the interpreter, and perhaps the whole group of sign language users may be placed in a most embarrassing stituation among their fellows, not to mention the situation the research worker may get into. Even when exotic cultures are not in question, the fact that the users of sign languages under investigation may be deaf persons immediately opens the possibility of intricate and special relationships between deaf and hearing persons in the community—these relationships too the field worker must be sensitive to and careful not to violate. Many appropriate considerations of ethics connected with research involving human beings are taken up in Report of the Consultative Group on Ethics (The Canada Council, 1977).

It should go without saying that the field worker makes sure that the informants and other persons involved in the data gathering are not made the objects of scorn, teasing, ridicule, or other persecution because of the worker's actions. If the research worker is not very well versed in the cultural norms and values of the society, however, such results may occur unintentionally. A good rule is to establish contact quickly with one or more persons in the community and become so well acquainted with them that they can guide and advise—and if the fat is already in the fire, can explain convincingly to the parties offended that the faux pas was a mistake of ignorance and not an intentional provocation.

One of the most important things to remember in working with sign language users who cannot hear is not to establish false hopes in the minds of informants and their families. In communities that have not yet been innundated by linguists, anthropologists, or sociologists, one may well find that the field worker's great interest in the sign language user becomes interpreted as forming some part of a medical, social, or economic aid program. In 1972 when Kuschel had concluded his data-gathering sessions with Rennell Island's only deaf and mute resident and was stuffing the last of his notebooks into his rucksack, a young Rennellese came up and asked him if it was true that Kãgobai would soon be able to hear and speak. Not only did Kuschel find himself without a reasonable answer; he also admits freely that his heart sank into his boots.

Hubert Smith (personal communication to Stokoe), whose reports on a Yucatec Mayan Indian village are made in documentary films, admits to facing a similar dilemma. His expedition could partially repay the villagers studied by giving them a new building for social activities. But the case of his sign language informants is special. The proportionately large number of deaf persons there results from genetically transmitted auditory disorders. Genetic counseling and care in marriage partner selection might reduce these. But the ethical situation is complex: Should outsiders give such counsel and foster the idea that to be deaf is a bad thing and to be avoided in this village? Presently the deaf villagers appear to be fully members of the culture as well adjusted as any. But government roads are coming closer and the slash and burn agriculture is giving way to wage-paid jobs. In the new conditions will not deaf villagers be at a disadvantage not before known there, and should intervention be withheld?

Perhaps the hard answer is that if the field researcher cannot stand the sinking heart and the troubled conscience the best course is to investigate something unconnected with such central human concerns.

One final ethical consideration might be the first that the field worker faces: What can be given, contributed, or added to the lives of those who helped that somehow repays the value of the time and information they have given to the investigator, whether for academic advancement or for the enlargement of ethnographic knowledge?

GENERAL SOCIAL INFORMATION[1]

File identification.

Date:_____ Place:_____

Investigator:_____ Informant:_____

Remarks: (e.g. Note whether signer had to observe any rules of formalized behavior toward other persons present and any effect of this on sign choice, etc.)

Informant identification.

Full name:_____

Age:____ Sex:____ Clan, lineage:_____

Living place (now & earlier): _____

_____

School attendance:_____

Vocational training:_____

Job, position:_____

Economic situation:_____

Marital state (explain unusual situations):_____

Social position in family_____
in subculture_____
in culture_____

Special status relative to signing (stigmatization, prestige, minority & majority views, etc.):_____

[1] On this and following pages, the guide suggests both note-keeping format and some pertinent questions to consider (or ask informants).

SIGNS, SIGN LANGUAGE, & COMMUNICATION

Sign use (permanent, temporary, w/ special others):
Reason(s) for use of signs:
Age when signs first used:
How & where learned:
Other signers in family, lineage, household, etc.):
Language spoken before use of signs:
Language spoken with signing:
Command of sign language (est. of observer & others):

Communication with other signers:
Communication with non-signers:

Is sign language related to other known s.l.:
Do variations or dialects of the s.l. exist:
Does the s.l. belong to an identified dialect:

Is there an expression (in local spoken and signed languages)
for gesture:
for signing:
for sign language:
for deafness:
for "hard-of-hearing":
for stuttering:
for muteness:
for deafness and muteness:

(Are the terms above related to or derived from terms used for describing hand, arm, or body movements—as e.g. in dance?)

BASIC SIGN VOCABULARY LIST

Cross referencing. Besides recording signs themselves, one should also index:

1. Glosses of the signs in the vernacular
2. Glosses of the sign in the investigator's language
3. Exact denotations of the signs
4. The relation between sign and culture; i.e. the cultural values attached to the denotatum

Sometimes it is easier to record signs in sentences than in isolation!

There are 200 words in this Basic Sign Vocabulary List; 96 of these signs are also in the Swadesh 200-word list (Samarin 1967, 1970). Signs below spelled with an initial capital letter are also in the Swadesh list.

arm	Tongue	penis	Father
Hand	tears	semen	Mother
finger	Tooth	vagina	Brother
fingernail	Ear	menstruation	Sister
Leg	Eye	orgasm (m.)	sibling
Foot	Neck	orgasm (f.)	son
Head	chest	Blood	daughter
Hair	Breast (female)	Heart	twins
Mouth	Belly	Bone	boy
Nose	Buttock	Skin	girl

baby
Child
Man
Woman
Husband
Wife
family
Person
person (same ethnic group as signer)
person (not in signer's ethnic group)
I
you
He
she
We
They

happy
angry
afraid
astonished
surprised
jealous
sad
contemptuous
disgusted
ashamed
shy
now (pres.)
long ago
recently
in future
morning
evening
midday
month
Year

Sun
Moon
Star
Cloud
Smoke
Fire
Ashes
Earth
Water
thunder
lightning
Wind
Rain
Day
Night
airplane
Bird
Animal
Dog
god (spirit, etc.)

Stone
Road
path
hillock
Flower
food
habitation (hut, house, etc.)
Tree
Leaf
birth
marriage
silence
noise
Dance
Cloth

intelligent
deaf
mute
crazy
deaf-mute

freeze
Cold
Warm
hot
Dry
Wet
colors (all basic color terms if poss)
gray
dark
light
Heavy
light (weight)
Far away
Near by
Here
empty
full up (as after eating)
thirsty
hungry
sick

sickness
stomach pain
headache
pregnant

Many
Few
yes
no
don't!
Good
Bad
pale
flushed
Small
large
Bite
break (into pieces)
cheat
Come
go away

Cook
Wash
Work
Count (1,2..)
Burn
hide (oneself)
hide (object)
search
Fight
Kill
Die
Live
discuss
Drink
Eat
Hear
receive
Give
remember
forget
dream
Sleep

Spit
steal
Talk
gaze
Laugh
walk
run
Thin
Thick
tired
awake
Dirty
defecate (m.)
defecate (f.)
urinate (m.)
urinate (f.)
sexual intercourse
Vomit
What ?
When ?
Where ?
why ?

A CHECKLIST OF CULTURAL ITEMS

Items with their signed designations, as a supplement to the vocabulary list, should be entered in notes according to the plan for study of material or cognitive culture.

A
artifacts

B
bodily activities
bodily functions
body parts

C
cognitive development
cloth, clothing
color terms
communication
counting system
crime

D
developmental stages

E
education
emotions
enumerations

F
fauna
flora
food

G
games
genealogical topics
geographical topics
greetings

H
habitation forms
household utensils

I
insults
initiatory rites

K
kinship system

M
magic
motion, verbs of
music

P
personal adornment
personal names
personal traits
production, material

S
sexual behavior
sexual deviance
shape forms
size
social stratification
social interaction, forms of

T
time sequences
tools

W
weapons
weather, types of
weights
winds, directions
working activities
working utensils

SENTENCES FOR SIGNED TRANSLATIONS

Below are some sentences suggested for field use and selected both to explore sentence types in the signed language and to collect ethnographic material. There is nothing special about them, but if several investigators in various parts of the world do gather information along the lines suggested both linguistic comparisons and cultural comparisons will be facilitated.

1. (simple stative and process sentences)
   - a Rain is pouring down
   - b The food is ready
   - c The man works hard
   - d The woman arrived last night
   - e We all like to eat

2. (evidence of inflection for person, gender, number, tense, etc.)
   - a The child played with the other children
   - b Women joined other women in preparing food
   - c A man will leave the village
   - d You told me that before
   - e I am watching for storms

3. (adjectives in the sign language)
   - a This food is cold
   - b Cold food is not good
   - c The children are happy
   - d Wild animals come at night

4. (adverbial modification in the sign language)
   - a The boy made fire with great difficulty
   - b The old man walked slowly
   - c The moon can hardly be seen through the clouds

5. (negation, questions, commands—does sign order change?)
   - a The enemies never returned
   - b No one ever saw him laugh
   - c Look, the mother is not watching her baby
   - d Bring me more (food, etc.)
   - e Are you sick?
   - f Where do you come from?
   - g Who helped carry the burden?

5. (continued)
   - h When do you leave?
   - i I wonder why his hair turned grey so early?
   - j When does a boy become a man?
   - k Go away!
   - l Hurry up!
   - m Bring the twins up here!

6. (conjunctions and copulative verbs in the sign language)
   - a Do you prefer sunshine or rain?
   - b If I come tomorrow, will that be ok?
   - c Is the moon full tonight, or tomorrow night?
   - d He is a rich man.

7. (how is magnitude expressed?)
   - a That animal (specified) was large
   - b I have only a small amount of food
   - c The child is very small
   - d His legs are short
   - e The woman has many children
   - f He is a good friend of mine but not a very, very good friend
   - g Many people here are your friends

8. (personal pronouns)
   - a I slept all day
   - b You must wake me up
   - c I think he will come tonight / I think she will come...
   - d These animals are ours
   - e (Continue to find expression of all pronoun terms)

9. (possessives)
   - a This is my house (hut, etc.)
   - b (Continue to cover possessive system as necessary)

10. (person reference)
   - a (Name of boy) is the son of (name of father/mother)
   - b (Mr./other title name) went to (place name) to visit (Mrs./other title name)
   - c (Explore use of nicknames in the sign language)

11. (time indications)
   - a Long ago my father died
   - b I will leave here tomorrow
   - c (Elicit sentences containing the users' divisions of the day, night, seasons, long ago, recent past, etc.)

12. (anomalous sentences?)
    a The water is dry
    b The moon laughed out loud
    c He drew a round square

13. (do the signers coin new terms—airplane, tax, atom bomb?)

14. (repetition and reduplication?)
    a Me climb cliff, wife watch, me climb climb climb wife watch watch watch

15. (spontaneous sentences)
    a (Signers' stories, experiences, etc.)
    b (In Christianized societies, Lord's Prayer in signs, as suggested by Ben Schowe in Signs for our Times 25, 1974)
    c (Let signer tell how day was spent)
    d (Collect different signers' versions of same story)

16. (record conversations of signers)

17. (note any paralinguistic signalling with the sign language)

18. (be alert to order in sign language phrases, transformations)

FIRST STEPS IN ANALYSIS

1. Do stories, conversations, begin or end in set ways?
2. Is one hand dominant in each signer's signing?
3. Does position, posture, affect selection of signing hand?
4. How does the signer attract attention? Get the floor?
5. How does the signer communicate in darkness?
6. What facial expressions go with what sign components?
7. Note the signer's use of surrounding space.
8. Are there in sign language cultural characteristics that do not come to light as conscious formulations?
9. Do signs relate to gestures used by non-signers there?
10. What of the gestures used by speaking-hearing people?
11. Relations of these gestures to specific situations, greeting, etc.?
12. Gestures used by children and not adults?
13. Are there any socially unacceptable gestures in the culture—tongue protrusion, manus ficus, hip wriggle, etc.?

ARCHIVES AND OUTLETS

Benefits to science of careful field work can be much increased if good data are easily available to others. Proper storage of film or tape records is also important if valuable efforts are not to be lost. Those planning to use 16mm film format should enquire before setting out for the field about the excellent storage and editing-viewing facilities of the National Anthropological Film Center of the Smithsonian Institution, Washington, DC, 20008. Those using other film sizes or videotape are invited to write to the Linguistics Research Laboratory (Gallaudet College, Washington, DC, 20002), attention of William C. Stokoe; there filmed and taped data on many sign languages are stored, indexed, and available for viewing by research visitors. European field workers are similarly invited to write to Rolf Kuschel, Psychological Laboratory, Copenhagen University, Njalsgade 94, DK-2300, Copenhagen S, Denmark.

Note too that research reports and full-scale studies are always welcomed by the quarterly journal SIGN LANGUAGE STUDIES, with editorial offices at the Linguistics Research Laboratory (address above).

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